

AMENDMENTS TO THE CLAIMS

1. (CURRENTLY AMENDED) A method to manufacture a biodegradable molded article comprising the steps of:

providing a slurry or dough molding material mainly made of starch or a derivative thereof and obtained by adding water therewith;

providing a coating film distinct from the slurry or dough molding material and mainly made of a biodegradable plastic and having hydrophobicity;

placing the slurry or dough molding material and the coating film into a mold having a given-shaped cavity to obtain a combination of the slurry or dough molding material and the coating film; and

heating and molding the combination of the slurry or dough molding material and the coating film in the mold to mold the slurry or dough molding material through steam expansion, and at the same time soften and pressure-bond the coating film to a surface of a biodegradable expanded molded article obtained through steam expansion molding, wherein

said mold has an exhaust hole; and

in the heating and molding step, a gas existing between the coating film and a surface of the mold is discharged out of the cavity through the exhaust hole.

2. (ORIGINAL) A method to manufacture the biodegradable molded article as set forth in claim 1, wherein

a space leading to the cavity through the exhaust hole is formed inside the mold, and

in the heating and molding step, the space is hermetically separated from outside the mold.

3. (ORIGINAL) A method to manufacture the biodegradable molded article as set forth in claim 2, wherein the hermetically separated space has a volume set between a third and twice that of a void in the cavity before heating and molding.

4. (ORIGINAL) A method to manufacture the biodegradable molded article as set forth in claim 1, wherein the gas existing between the coating film and a surface of the mold is discharged out of the mold through the exhaust hole in the heating and molding step.

5. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 1, wherein the exhaust hole has a cross section between 0.12 mm² and 1.13 mm².

6. (CURRENTLY AMENDED) A method to manufacture a biodegradable molded article comprising the steps of:

providing a slurry or dough molding material mainly made of starch or a derivative thereof and obtained by adding water thereto;

providing a coating film distinct from the slurry or dough molding material and mainly made of a biodegradable plastic and having hydrophobicity;

placing the slurry or dough molding material and the coating film into a mold having a given-shaped cavity to obtain a combination of the slurry or dough molding material and the coating film; and

heating and molding the combination of the slurry or dough molding material and the coating film in the mold to mold the slurry or dough molding material through steam expansion, and at the same time soften and pressure-bond the coating film to a surface of a biodegradable expanded molded article obtained through steam expansion molding,

wherein the given-shaped cavity of the mold has a deep drawing shape, and the molding material and the coating film ~~and~~ placed therein are substantially flat for heating and molding to manufacture a biodegradable molded article of a deep drawing shape.

7. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 1, wherein

a mold made up of a pair of a convex mold and a concave mold is used,

the molding material and the coating film are placed between the convex mold and the concave mold before the heating and molding,

in the heating and molding step, a central part of the coating film is deformed by moving at least either one of the convex mold and the concave mold in a direction where these two molds fit together, and

at least while the coating film is being deformed, the convex mold and the concave mold are straightly moved closer to each other.

8. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 1, wherein

a mold made up of a pair of a convex mold and a concave mold is used,

the molding material and the coating film are placed between the convex mold and the concave mold before the heating and molding,

in the heating and molding step, a central part of the coating film is deformed by moving at least either one of the convex mold and the concave mold in a direction where these two molds fit together, and

at least until the coating film starts to deform, both the convex mold and the concave mold are moved closer to each other.

9. (ORIGINAL) A method to manufacture a biodegradable molded article comprising the steps of:

preparing: a slurry or dough molding material mainly made of starch or a derivative thereof and obtained by adding water thereto; and a coating film mainly made of a biodegradable plastic and having hydrophobicity; and

heating and molding the molding material and the coating film in a mold having a given-shaped cavity to molding an expanded molded article through steam expansion by, and at the same time soften and pressure-bond the coating film to a surface of a biodegradable expanded molded article,

a mold made up of a pair of a convex mold and a concave mold being used,

the molding material and the coating film being placed between the convex mold and the concave mold before the heating and molding,

in the heating and molding step, a central part of the coating film being deformed by moving at least either one of the convex mold and the concave mold in a direction wherein these two molds fit together, and at least while the coating film is being deformed, a relative moving speed of the convex mold to a plane formed by connecting a surface of non-deforming parts on an outer periphery of the coating film being maintained from 8 mm/s to 12 mm/s.

10. (ORIGINAL) A method to manufacture the biodegradable molded article as set forth in claim 9, wherein the convex mold and the concave mold are straightly moved closer to each other at least while the coating film is deformed.

11. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 9, wherein both of the convex mold and the concave mold are moved to approximate each other at least until the coating film starts to deform.

12. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 1, wherein the heating is done so that the mold has a temperature not less than a softening point of the coating film and at least 10°C lower than the melting point thereof.

13. (CURRENTLY AMENDED) A method to manufacture a biodegradable molded article comprising the steps of:

providing a slurry or dough molding material mainly made of starch or a derivative thereof and obtained by adding water thereto;

providing a coating film distinct from the slurry or dough molding material and mainly made of a biodegradable plastic and having hydrophobicity;

placing the slurry or dough molding material and the coating film into a mold having a given-shaped cavity to obtain a combination of the slurry or dough molding material and the coating film; and

heating and molding the combination of the slurry or dough molding material and the coating film in the mold to mold the biodegradable expanded molded article through steam expansion, and at the same time soften and pressure-bond the coating film to a surface of a biodegradable expanded molded article,

said heating being done so that the mold has a temperature not less than a softening point of the coating film and at least 10°C lower than a melting point thereof.

14. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 12, wherein the heating is done so that the mold has a temperature not less than 130°C.

15. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 12, wherein the heating is done so that the mold has a temperature not less than 150°C.

16. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 1, wherein a slip agent is applied to a surface of the mold contacting the coating film before the heating and molding.

17. (ORIGINAL) A method to manufacture the biodegradable molded article as set forth in claim 16, wherein the slip agent is a fluoroplastic layer formed on a surface of the mold.

18. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 1, wherein the coating film is a film mainly made of a denatured polyester.

19. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 1, wherein the coating film is a biaxially stretched film.

20.-25. (CANCELLED).

26. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 2, wherein the exhaust hole has a cross section between 0.12 mm² and 1.13 mm².

27. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 3, wherein the exhaust hole has a cross section between 0.12 mm² and 1.13 mm².

28. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 4, wherein the exhaust hole has a cross section between 0.12 mm² and 1.13 mm².

29. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 6, wherein

a mold made up of a pair of a convex mold and a concave mold is used,

the molding material and the coating film are placed between the convex mold and the concave mold before the heating and molding,

in the heating and molding step, a central part of the coating film is deformed by moving at least either one of the convex mold and the concave mold in a direction where these two molds fit together, and

at least while the coating film is being deformed, the convex mold and the concave mold are straightly moved closer to each other.

30. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 6, wherein

a mold made up of a pair of a convex mold and a concave mold is used,

the molding material and the coating film are placed between the convex mold and the concave mold before the heating and molding,

in the heating and molding step, a central part of the coating film is deformed by moving at least either one of the convex mold and the concave mold in a direction where these two molds fit together, and

at least until the coating film starts to deform, both the convex mold and the concave mold are moved closer to each other.

31. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 10, wherein both of the convex mold and the concave mold are moved to approximate each other at least until the coating film starts to deform.

32. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 6, wherein the heating is done so that the mold has a temperature not less than a softening point of the coating film and at least 10°C lower than the melting point thereof.

33. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 9, wherein the heating is done so that the mold has a temperature not less than a softening point of the coating film and at least 10°C lower than the melting point thereof.

34. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 13, wherein the heating is done so that the mold has a temperature not less than 130°C.

35. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 13, wherein the heating is done so that the mold has a temperature not less than 150°C.

36. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 6, wherein a slip agent is applied to a surface of the mold contacting the coating film before the heating and molding.

37. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 9, wherein a slip agent is applied to a surface of the mold contacting the coating film before the heating and molding.

38. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 6, wherein the coating film is a film mainly made of a denatured polyester.

39. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 9, wherein the coating film is a biaxially stretched film.

40. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 9, wherein the coating film is a film mainly made of a denatured polyester.

41. (PREVIOUSLY PRESENTED) A method to manufacture the biodegradable molded article as set forth in claim 6, wherein the coating film is a biaxially stretched film.

42.-43. (CANCELLED).